

MINUTES OF THE ANNUAL SDS BUSINESS MEETING, 34th IGC, BRISBANE, AUSTRALIA TUESDAY, JUNE 7, 2012

R.T. BECKER & C.E. BRETT

Attendance: The Chairman (R.T. BECKER), (future) Vice-Chairman (C.E. BRETT), **TMs:** C. BURROW, CHEN, X., MA, X., M. NARKIEWICZ, S. TURNER, J.I. VELENZUELA-RÍOS; **CMs:** P. BUDIL, J. FRYDA, K. HISTON, L. KOPTIKOVÁ, T. SUTTNER; **GUESTS:** L. FERROVÁ, S. HARTENFELS, E. KIDO, LIAO, J.-C., K. NARKIEWICZ, K. TRINAJSTIC, J. WATERS. This is a much better attendance as at the past IGCs.

1. Introductions and apologies for absence

The meeting started in Room P8 of the Brisbane Convention and Exhibition Centre at 19.00 and was opened by the CHAIRMAN. Some copies of the agenda were passed out since they were posted by email rather late (the previous Sunday).

The current secretary of SDS and incoming Chairman, John MARSHALL, was unable to attend as he is doing fieldwork in the Arctic region. The Vice-Chairman, A. EL HASSANI, is not part of the Moroccan Delegation to IGCs and, as many others, even from within Australia, could not afford the high IGC fees and travel costs. The secretary-elect is Ladislav SLAVIC, who also could not attend. **Other apologies:** **TMs:** N. IZOKH, U. JANSEN, R. MAWSON, J. OVER, E. SCHINDLER **CMs:** AUNG, A.-K., K. BAKHAREV, C. DOJEN, C. HARTKOPF-FRÖDER, O. OBUT, J. TALENT, G. YOUNG, T. WRIGHT.

2. Approval of 2011 Minutes

The Minutes of the Novosibirsk Business Meeting were circulated in SDS Newsletter 27. The CHAIRMAN reminded that all CMs and TMs should have a section in the SDS Newsletter. He has incorrect addresses for some members whose newsletters were returned; everybody should record any changes, especially of email addresses. TM Nacho VALENZUELA-RÍOS commented that he was surprised by the new contribution of CM A. KIM on the Kitab GSSP section; he seems to ignore some of earlier discussions. TM VALENZUELA-RÍOS intends to send detailed comments. The Minutes were otherwise approved.

3. Chairman's Business

3.1. Obituaries

Since the Novosibirsk meeting K. ZAGORA died. He has been too ill for many years to attend meetings but maintained a strong interest in SDS.

Also non-members, who were deeply involved in Devonian research, have passed away, notably Volker EBBINGHAUSEN, the famous ostracod worker A. RABIEN, and Hans Juergen ANDELE.

3.2. New Officers

By the rules of ICS, the new SDS Officers will start their duties after the IGC. The CHAIRMAN expressed his pleasure that John MARSHALL agreed to take over, accepting the formal vote. C.E. BRETT will be the new Vice Chairman, replacing A. EL HASSANI, who will continue as a TM for Morocco. Ladislav SLAVIC is the new SECRETARY. The full slate of new officers was elected by unanimous vote (but a few TMs did not cast their vote).

The CHAIRMAN expressed his appreciation for his involvement in SDS, especially for the the field meetings. He noted the excellent meetings in Nevada, the Kitab Reserve, Cincinnati, and Novosibirsk, not to forget the Old Red Continent Fieldtrip that he could not join.

SDS has been successful in replacing older members with new and active members; he thanked all past and current members for their valuable contributions. He promised to continue to be actively involved and to edit the newsletter.

CM Sue TURNER followed up with a formal note of sincere thanks to RTB for his service to SDS; as did others.

3.3. Other topics

The CHAIRMAN reported that each November there must be a report to ICS outlining goals and achievements; he is impressed with all that SDS has accomplished; many of the goals for 2012 have been or will be met. However,

the symposium on “The Devonian of Asia and Australia” planned for this IGC failed, because only three contributions were submitted. These presentations were merged with Symposium 8 of IGCP 596 on “Climate change and biodiversity patterns in the Mid-Palaeozoic”.

Something that has not yet been completed are the formal descriptions of substage levels in *Lethaia* (which is an official ICS journal). TM Jeff OVER should normally address/lead the mid-upper Frasnian substage boundaries. CM Pierre BULTYNK and colleagues should deal with the Middle Givetian, the CHAIRMAN and Sarah ABOUSSALAM with the Upper Givetian. However, an official recognition of substages has yet to be voted on by ICS.

At the ICS Workshop in Prague, the CHAIRMAN presented a discussion on the utility of substages but it was not brought to a vote; Stan FINNEY, the ICS Chairman, appeared favorable to this idea but had not yet included it as a formal item on his agenda. However, it would be a topic for the ICS Subcommittee chairs meeting on Thursday, August 9 (it was brought to a vote and approved).

Another topic was the proposed second re-sampling campaign of the Emsian at the Kitab Reserve; RTB called upon the Czech contingent to discuss the further strategy with the Uzbek and Novosibirsk members.

Update of SDS homepage: all issues of the SDS Newsletter since RTB took over as the editor are available on-line; but older issues, some of them in rather poor shape, need to be scanned and added as they contain a good deal of critical information on GSSPs etc, which has not been published anywhere else. The scanning is in progress but he is still missing a copy of issue No. 10. He has also compiled a new set of GSSP illustrations in color, including photos of outcrops and of the index fossils. CM Gil KLAPPER, for example, sent a picture of the oldest *A. rotundiloba* from the Frasnian GSSP, CM Ladislav SLAVIK provided photos from Czech GSSPs. The CHAIRMAN agreed to write a Devonian chapter for the planned new *Encyclopedia of Stratigraphy* but other members should be involved for shorter, more specialized chapters, such as Devonian palynostratigraphy or on specific regions. The Devonian Chapter for the new Phanerozoic Time Scale volumes (GRADSTEIN et al. 2012) should be out but there will be no presentation at this IGC (partly because of lack of cooperation with ICS).

The objectives for 2012 have been met by 2/3; some issues are:

The rarity of critical early polygnathids at Zinzilban for defining a revised future basal Emsian GSSP

The revision of siphonodellids; there is a wide array of poorly understood and documented morphotypes/taxa prior to the Hangenberg Event level.

A major problem around the world is a decline of support for or interest in the Devonian or other deep time studies in general. CM Sue TURNER noted the lack of funding for Paleozoic studies in most surveys. Kate TRINAJSTIC of Western Australia is more optimistic and noted active work in the Palaeozoic and the reintroduction of biostratigraphy into curricula of several universities. The CHAIRMAN reported that the situation in Canada is poor; Charles HENDERSON (Permian Chairman) and D.I. JOHNSTON are working on conodonts but both are no members of SDS. Therefore, Jed DAY has been made titular member representing Canada because of his extensive work, together with CM Mike WHALEN, in the western Canada Devonian.

There is not much improvement concerning South America, with almost no formal representation. Some work on the Devonian is done by Petrobras but this is locked in confidential files. Guillermo ALBANESI will organize the next ICOS meeting in Mendoza, Argentina, next year. SDS representation in SE Asia has improved in recent years and there are good future perspectives, especially by the cooperation with IGCP 596.

4. ICS Matters

ICS had several meetings in conjunction with this IGC convention: Monday night an open general meeting; a meeting of the International Subcommittee on Stratigraphic Nomenclature (ISSC – but without its chairman), and the ICS Business meeting Thursday night (the CHAIRMAN and new VICE-CHAIRMAN attended; both received some support from ICS)

Two major issues came up in Monday’s meeting:

a) There is a call to modify and update the International Stratigraphic Code (often termed Hedberg Code). It was modified subsequently but is now partly out of date, especially with respect to the variety of new methods now being employed in stratigraphic correlation. For example, CM Brooks ELLWOOD is using a bar code approach to magnetic susceptibility and proposing widespread correlations of MS zones, which he numbers. But so far there is no formal policy governing how this is to be applied. Without formal guides there might be nomenclatorial chaos. The same problem applies to units in sequence stratigraphy, cyclostratigraphy, and quantitative

stratigraphy (e.g., the numbering of CS units of graphic correlation). The ICS (first via ISSC) will have a lot of say in the revisions and subcommissions should provide important input. Proposals for new chapters of the future code have been and will be published in Newsletters on Stratigraphy. But, partly, e.g., in the case of sequence stratigraphy, they cause significant disagreement by some specialists.

b) Stan FINNEY would like formal monuments like that at Nanbiancun in China (D/C Boundary Auxiliary Stratotype) or at least plaques set up at all GSSPs. Many Devonian ones have no such markers, including the Frasnian, Famennian and the Givetian at Jebel Mech Irdane (Vice-Chairman Ahmed EL HASSANI will work toward getting this accomplished). There are some bad experiences: in the Prague area plaques were stolen for the copper. Perhaps at least cheaper and replaceable markers should be used.

5. Revision of GSSPs

5.1. Pragian-Emsian

A new boundary stratotype needs to be agreed upon. TM VALENZUELA-RÍOS noted that there seemed to be some backsliding by our Uzbek colleagues, concerning issues that were thought to have been sorted out. He plans to present a formal discussion of details soon and hopes we can move forward toward ratification of a new higher GSSP level. The CHAIRMAN noted that specific questions, such as the taxonomy and range of *Nowakia praesulcata*, have to be re-addressed.

As for the Emsian substages, RTB called on CM Jiri FRYDA, who introduced Lenka FERROVÁ. She is presently working on dacryoconarids around the type Dalejan. This will provide a zonation that will help to clarify aspects of the type Dalejan boundary, a very narrow interval prior to the extinction of anetoceratids. The CHAIRMAN expressed some concern that only very few people in the world could identify the critical dacryoconarids. He discussed the issue of the “Pragian Limestone” in Morocco, which yielded icriodid conodonts (*Caud. celtibericus*) which are correlated in Spain with the *excavatus* Zone; hence it is (partly) of Emsian age, at least in the present GSSP definition. CM Petr BUDIL expressed concern about the many marker trilobites of that unit, which appeared to be of Pragian aspect (of Bohemian definition).

At the Novosibirsk meeting a need to have a revision of the brachiopod stratigraphy in the Emsian type area was expressed. This was met by the review of TM Uli JANSEN in Newsletter No. 27.

5.2. D/C Boundary

We were joined during the meeting by colleagues from the Carboniferous Subcommittee and the D/C Boundary Task Group. Markus ARETZ, the D/C TG Chairman, reported that he has circulated lists of questions, and he is trying to gather data from others. But so far he has gotten very little feedback from other members.

The Chairman noted that the sampling of conodonts at the Lalla Mimouna North D/C boundary sections has been completed – samples are currently being processed.

Jiri KALVODA noted that conodonts from the Moravia area have been processed by a student. Others have done new fieldwork in Belgium and Montagne Noire. The CHAIRMAN stressed the importance of communication, as some important results are not known to the Task Group and subcommissions. The D/C Task Group will join the Morocco meeting in March 2013. The CHAIRMAN also suggested that we might keep better track of research by CM Gordon BAIRD and /Joe HANNIBAL on the very high Devonian in SW New York State and Pennsylvania

Barry RICHARDS (Chairman of the Carboniferous Subcommittee) reported on new results from D/C boundary section in South China. A publication in *Paleoworld* discusses the results of absolute dating at Dapoushang. The CHAIRMAN was asked to review a paper on a new South China section but he felt it was inadequately documented and returned to authors for substantial revision; the section, which includes ~50m of the Hangenberg Shale interval, needs much more thorough sampling. The SDS Newsletter 27 included a section on possibly poorly known D/C boundary publications, for example from Vietnam.

Barry RICHARDS then talked about the economic importance of oil sands at the D/C boundary; the Exshaw Shale and related units have an enormous hydrocarbon potential, especially when horizontal drilling is employed. He then went on to short presentation on the present D/C stratotype at LaSerre; there are well-known problems with the section and at least the D/C boundary golden spike would need to be lowered. It remains the GSSP until a more adequate section is established. There is some concern that a local sheep farmer might fill in the trench and therefore, he has taken steps to try and insure its preservation. The farmer did fill in other trenches, such as La Serre A, A', C and D, which were among the most important sections for the Givetian/Frasnian and Frasnian/Famennian boundaries. Currently the D/C boundary is placed between Beds 88/89 but CM Sandra

KAISER found the first *Siphonodella sulcata* in bed 84). Lower beds are clastics without conodonts, so there is no preserved *praesulcata-sulcata* lineage. The section is probably in reasonable shape. Dieter WEYER excavated lower and higher beds but those parts were quickly filled in. In any case, perhaps not too much time should be spent on this section, as it clearly seems not to be an adequate GSSP.

Moving on, Sven HARTENFELS and the CHAIRMAN sampled additional sections in southern Morocco and found more *Siphonodella*-relatives (intermediates to *Polygnathus*) in pre-Hangenberg beds; they were more common and widely distributed than people had thought. For the Urals, Svetlana NIKOLAEVA noted a list of potential sites; these have to be better presented to the Task Group.

6. Devonian Substages

6.1. Lochkovian

A new paper by CM Carlo CORRADINI and Maria CORRIGA in the *Bulletin of Geosciences* gives a tri-partite subdivision of Lochkovian; this was actually already proposed in several previous publications. A formal substage subdivision of the Lochkovian could be a future task for SDS.

6.2. Pragian

It will need to have two substages, once the Pragian-Emsian boundary is figured out. The current basal Emsian GSSP shall define the future upper substage.

6.3. Emsian

See Emsian revision.

6.4. Eifelian

It can be subdivided into two substages, perhaps using the base of Union Springs (Bakoven) bioevent, as recognized by DESANTIS & BRETT (2011) in the Appalachian Basin (i.e. at the *costatus-australis* zonal boundary). Eifelian substages should be dealt with after the Emsian and Givetian-Famennian substages have been formalized.

6.5. Givetian

The Givetian has three divisions. At Blauer Bruch (Kellerwald, Germany), LOTTMAN'S (1990) *pumilio* beds and the Taghanic Event Interval are present. There are new unpublished data, which update and correct previous papers. Better sections should be sought for the Upper Givetian; one possibility might be the Boyle-Portwood section in Irvine, Kentucky.

TM VALENZUELA-RÍOS and LIAO Jau-Chyn have a manuscript on Givetian conodonts in the Pyrenees for the proceedings volume of IGCP 596 in *Bulletin of Geosciences*.

6.6. Frasnian

TM Jeff OVER was unable to attend and to report. TM Jed DAY, CM Mike WHALEN and co-authors keep supplying new Canadian data concerning the "*punctata* Event" (= Middlesex Event).

Re-sampling at the famous Martenberg section of the Rhenish Massif by KLAPPER & BECKER (1999) suggested that the *jamieae* Zone may not exist in its type-section. This is currently checked by additional samples and important for the understanding of the basal Upper Frasnian.

6.7. Famennian

It is time to vote on the formal definition of an Upper Famennian substage. A publication by CM Maurice STREEL and co-authors on the palynostratigraphy and conodont correlation in the Ardennes is in preparation.

The proposal by HARTENFELS et al. (2009) to place the base of the Upper Famennian at the base of the (Lower) *Annulata* Event (SDS Newsletter 24) has never received any comments.

7. SDS Membership

7.1. New TMs for 2012-2016

CM Ladislav SLAVIK (Czechia), replacing Jindra HLADIL (Czechia)

CM ZHU Huuaicheng (Nanjing, China), replacing ZHU Min (Beijing, China)

CM Carlo CORRADINI (Italy), replacing Gavin YOUNG (Australia)

7.2. New CMs

Sven HARTENFELS (Münster, Germany: conodonts)
Zhor Sarah ABOUSSALAM (Münster, Germany: conodonts)
Svetlana NIKOLAEVA (Moscow, Russia, and London: ammonoids)
Olga IZOKH (Novosibirsk, Russia, isotope stratigraphy)
Aleksandr YAZIKOV (Novosibirsk, Russia, brachiopods)
David I. JOHNSTON (Calgary, Canada, conodonts)
James ZAMBITO (Cincinnati, USA, event and sequence stratigraphy)
Kate TRINAJSTIC (Perth, Australia, conodonts and fish)
Lenka FERROVÁ (Prague, Czechia, dacroconarids)
Leona KOPTIKOVÁ (Prague, Czechia, physical and chemostratigraphy)
Stanislava VODRASKOVÁ (Prague, Czechia, conodonts)
A. POLINAEVA (Bulgaria, sedimentology, sequence stratigraphy)

8. SDS Publications:

The new *Phanerozoic Timescale* (GRADSTEIN et al. 2012) includes a Devonian chapter by BECKER, R.T., FRADSTEIN, F.M & HAMMER, O. The latter two authors are responsible for the new and partly different geochronological timescale, RTB wrote the other chapters, building on the chapter of the last Timescale book by M.R. HOUSE.

It is planned to publish a Proceedings Volume of the Novosibirsk meeting in *Palaeodiversity and Palaeoenvironments* (chief editor P. KÖNIGSHOF) of the Senckenberg Institute. But contributions are overdue.

Proceedings of the symposium of IGC 596 held here at the IGC in Brisbane (plus perhaps papers from the London meeting of IPC in 2010) shall be published as a special volume: “Devonian Climate, Sea Level and Biological Events” in the *Special Publications* series of the *Geological Society of London*, with R.T. BECKER, P. KÖNIGSHOF & C. BRETT as editors. The CHAIRMAN noted that he needed a list of probable contributors and approximate titles. The anticipated deadline for manuscripts will be July, 2013 (the PRS is now given an impact ranking and should not be considered “gray literature”)

The planned *Encyclopedia of Stratigraphy* needs a general Devonian chapter and short papers on special topics.

9. Meetings

International Field Symposium “The Devonian and Lower Carboniferous of northern Gondwana”, jointly with the D/C Boundary Task Group and IGCP 596. end March-early April. Please submit registrations soon; at least indicate to Ahmed El Hassani your intent to attend so the list can be finalized. This meeting will include both Devonian and Carboniferous and provide a forum for discussing D/C boundary issues

International Meeting on Pre-Cenozoic Climate; Toulouse September 17th to 19th

STRATI 2013, 1st International Congress on Stratigraphy, 1st to 7th July 2013, Lisbon, Portugal. ICS wants SDS to play some role but there is no special Devonian topics day.

ICOS (Conodont) meeting in Mendoza, Argentina summer 2013.

Fourth International Paleontological Congress, also in Mendoza, September 28 to October 24, 2014

Meetings of IGCP 596

2012: GSA North Central joint meeting, with an IGCP 596 symposium, hosted by Jed DAY & Brian WITZKE

2013: joint Morocco meeting with SDS (see above)

Possible meeting in SE Asia (Vietnam-Malaysia)

2014: Evolutionary Paleocology in mid-Paleozoic; possible meeting in Mongolia

4th IPC (see above)

2015: Final meeting; probably in Frankfurt, Germany

10. Financial Report

The CHAIRMAN reported that just \$6.00 have remained from the last year. The ICS subvention for 2012 (750 \$) is used for Newsletter 28 (600 \$), which leaves 156 \$ for future work. A special ICS subvention of 2500 \$ was reserved for two SDS Officers to attend the IGC (CHAIRMAN and future VICE-CHAIRMAN; originally a full coverage of costs was announced).

11. No other business

(SDS was running much later than the given 9 p.m. deadline).